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NOTICE OF ALLOWANCE AND FEE(S) DUE

22852 7590 02/20/2008

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
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901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

COUGHLAN, PETER D

ART UNIT

PAPER NUMBER

2129

DATE MAILED: 02/20/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/697,433

10/31/2003

Thomas Arend

08516.0005

7747

TITLE OF INVENTION: IDENTIFYING SOLUTIONS TO COMPUTER PROBLEMS IN MAIN SYSTEM BY SERVICE SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	05/20/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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Certificate of Mailing or Transmission

Hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/697,433 10/31/2003 Thomas Arend 08516.0005 7747

TITLE OF INVENTION: IDENTIFYING SOLUTIONS TO COMPUTER PROBLEMS IN MAIN SYSTEM BY SERVICE SYSTEM

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nonprovisional NO \$1440 \$300 \$0 \$1740 05/20/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
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COUGHLAN, PETER D 2129 706-047000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 433 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 433 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/697,433

Applicant(s)

AREND, THOMAS

Examiner

PETER COUGHLAN

Art Unit

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/31/2007.
2. ☒ The allowed claim(s) is/are 1-5 and 7-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Examiner's Amendments / Reasons For Allowance

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In the claims.

2. Claim 6 is to be cancelled.

Claim 12 is to read: An inference module stored on a computer readable medium, that when executed on a processor, causes the processor to perform a method, the method comprising:

evaluating problems in a main computer system that executes an application, wherein:

the inference module processes problem related data with knowledge representations to identify solution identification rules, said knowledge representations being stored with sets of solution identification rules semantically grouped, and

the inference module characterized in that the inference module is part of a service system receiving problem related data from the main computer system over a network, said problem related data representing a problem identified about data in the main system; and

returning the solution identification rules to the main system, where in the service system returns solution identification rules that solve the problem directly,

further wherein during the processing of problems related data, the inference module identifies the solution identification rules by applying knowledge representations in at least one of a sequential order, a hierarchical order, and a dynamically adaptive order, and

further wherein the solution identification rules comprise computer instructions to automatically solve the problem.

3. Authorization for this Examiner's amendment was given in a telephone interview with Mr. Patel on 2/11/2007.

5. The following is an Examiner's Statement for reasons for allowance:

Claims 1-5, 6-17 are considered allowable since when reading the claims in light of the specification, as per MPEP §2111.01, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claims, including the claimed invention of a main computer system comprising a database, an application server and a front-end server, wherein the main system executes an application in cooperation with a human user and a remote service computer system for evaluating problems in the main system comprising: a service module (embedded with the main computer system), to collect problem related data from the main system said problem related data representing a problem identified about data in the main system an acquisition module (embedded with the main computer

system) to acquire knowledge representations a knowledge module (embedded with the main computer system), to store the knowledge representations generate solution identification rules comprising computer instructions to automatically solve the problem, group sets of the solution identification rules semantically, and store the knowledge representations with the sets of semantically grouped solution identification rules and an inference module (embedded with the main computer system) to process problem related data with knowledge representations to identify the solution identification rules, and forward the solution identification rules through the service module to the main computer system wherein the inference module identifies the solution identification rules by applying knowledge representations to the problem related data in at least one of a sequential order, a hierarchical order, and a dynamically adaptive order and, wherein the identified solution identification rules are applied to solve the problem identified in the main system, as specified in claim 1, 7 and 12.

6. The closest prior art teaches (U. S. Patent 6237144, referred to as **Wookey**) a main computer system comprising a database, an application server and a front-end server, wherein the main system executes an application in cooperation with a human user. (**Wookey**, Fig. 1A and 1B, C3:39 through C4:4; 'Main computer system' of applicant is equivalent to 'monitored computer system' of Wookey. 'Database' of applicant is inherent by all the databases within all the computers being monitored within the main computer system (item 102). 'Application server' of applicant is disclosed by 'tests' of Wookey. 'Front end server' of applicant is equivalent to

'communication' of Wookey.), and a remote service computer system for evaluating problems in the main system (**Wookey**, Fig. 1A and 1B, C3:39 through C4:4; 'Remote service computer system' of applicant is equivalent to 'exemplary computer system' (item 100) of Wookey.) comprising: a service module, to collect problem related data from the main system said problem related data representing a problem identified about data in the main system (**Wookey**, Fig. 13, C17:61 through C18:29; 'Service module' which collects 'problem related data' of applicant is equivalent to 'run alerts against incoming host state' (item 1301) of Wookey.) an acquisition module to acquire knowledge representations (**Wookey**, Fig. 13, C17:61 through C18:29; 'Acquisition module' of applicant is disclosed by the search for 'keywords' of known problems of Wookey.)

7. The references either by themselves or in combination fail to teach a knowledge module, to store the knowledge representations generate solution identification rules comprising computer instructions to automatically solve the problem, group sets of the solution identification rules semantically, and store the knowledge representations with the sets of semantically grouped solution identification rules, and an inference module to process problem related data with knowledge representations to identify the solution identification rules, and forward, the solution identification rules through the service module to the main computer system, wherein the inference module identifies the solution identification rules by applying knowledge representations to the problem related data in at least one of a sequential order, a hierarchical order, and a dynamically

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adaptive order and, wherein the identified solution identification rules are applied to solve the problem identified in the main system.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Peter Coughlan whose telephone number is (571) 272-5990, Monday through Friday from 7:15 a.m. to 3:45 p.m. or contact the Supervisor Mr. David Vincent at (571) 272-3080.

/P. C./

Examiner, Art Unit 2129

Peter Coughlan

Patent Examiner

2/11/2008

/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129